



SITOP UPS1600 24 V DC/20 A, USB  
 SITOP UPS1600 20A USB UNINTERRUPTIBLE POWER SUPPLY  
 WITH USB INTERFACE INPUT: 24 V DC OUTPUT: 24 V DC/20 A

Input	
Supply voltage for DC Rated value	24 V
Voltage curve at input	DC
input voltage range	22 ... 29 V DC
Mains buffering	
Type of energy storage	with batteries
Charging current	
• 1	0.1 A
• 2	4 A
Output	
Output voltage	
• in normal operation for DC Rated value	24 V
• in buffering mode for DC Rated value	24 V
Formula for output voltage	$V_{in} - \text{approx. } 0.01 \times I$
ON-delay time typical	60 s
Voltage increase time of the output voltage typical	60 ms
Output current Rated value	20 A
Property of the output Short-circuit proof	Yes
Design of short-circuit protection	Limitation to $3 \times I$ rated for 30 ms; through-conductivity for $1.5 \times I$ rated for 5 sec/min
Active power supplied typical	480 W
Efficiency	
Efficiency in percent	

<ul style="list-style-type: none"> <li>• at rated output current at rated output current typical</li> </ul>	98.2 %
<ul style="list-style-type: none"> <li>• in case of accumulator operation typical</li> </ul>	98.2 %
Active power loss	
<ul style="list-style-type: none"> <li>• at rated output current at rated output current typical</li> </ul>	8.6 W
<ul style="list-style-type: none"> <li>• in case of accumulator operation typical</li> </ul>	8.6 W

## Protection and monitoring

Product function	
<ul style="list-style-type: none"> <li>• reverse polarity protection against energy storage unit polarity reversal</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• reverse polarity protection against input voltage polarity reversal</li> </ul>	Yes

## Signaling

Display version	
<ul style="list-style-type: none"> <li>• for normal operation</li> </ul>	Normal operation: LED green (OK), floating changeover contact "Bat/OK" to setting "OK" ("OK" means: Voltage of the supplying power supply unit is greater than cut-in threshold set at the DC UPS module); Lack of buffer standby: LED red (alarm), floating changeover contact "Alarm/Bat" to setting "Alarm"; Battery replacement required: LED red (alarm) flashing with approx. 0.25 Hz, floating changeover contact "Alarm/Bat" switching with approx. 0.25 Hz; Energy storage > 85%: LED green (Bat > 85%), floating NO contact "Bat > 85" closed; Permissible contact current capacity: DC 60 V/1 A or AC 30 V /1 A
<ul style="list-style-type: none"> <li>• in buffering mode</li> </ul>	Buffered mode: LED yellow (Bat), floating changeover contact "OK/Bat" to setting "Bat"; Prewarning battery voltage < 20.4 VDC: LED red (alarm), floating changeover contact "Alarm/Bat" to setting "Alarm"; Energy storage > 85%: LED green (Bat > 85%), floating NO contact "Bat > 85" closed

## Interface

Product component PC interface	Yes
Design of the interface	USB

## Safety

Galvanic isolation between entrance and outlet	No
Operating resource protection class	Class III
Certificate of suitability	
<ul style="list-style-type: none"> <li>• CE marking</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• UL approval</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• as approval for USA</li> </ul>	cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259
<ul style="list-style-type: none"> <li>• C-Tick</li> </ul>	Yes
Type of certification CB-certificate	Yes
Shipbuilding approval	available soon
Protection class IP	IP20

EMC	
Standard	
<ul style="list-style-type: none"> <li>• for emitted interference</li> <li>• for interference immunity</li> </ul>	EN 55022 Class B EN 61000-6-2
Operating data	
Ambient temperature	
<ul style="list-style-type: none"> <li>• during operation</li> <li>• during transport</li> <li>• during storage</li> </ul>	-25 ... +70 °C -40 ... +85 °C -40 ... +85 °C
Mechanics	
Type of electrical connection	screw-type terminals
<ul style="list-style-type: none"> <li>• at input</li> <li>• at output</li> <li>• for battery module</li> <li>• for control circuit and status message</li> </ul>	24 V DC: 2 screw terminals for 0.2 ... 6 mm <sup>2</sup> /24 ... 13 AWG 24 V DC: 2 screw terminals for 0.2 ... 6 mm <sup>2</sup> /24 ... 13 AWG 24 V DC: 2 screw terminals for 0.2 ... 6 mm <sup>2</sup> /24 ... 13 AWG 14 screw terminals for 0.2 ... 1.5 mm <sup>2</sup> /24 ... 16 AWG
Width of the enclosure	50 mm
Height of the enclosure	125 mm
Depth of the enclosure	125 mm
Required spacing	
<ul style="list-style-type: none"> <li>• top</li> <li>• bottom</li> <li>• left</li> <li>• right</li> </ul>	50 mm 50 mm 0 mm 0 mm
Net weight	0.41 kg
Product property of the enclosure housing for side-by-side mounting	Yes
Mounting type	Snaps onto DIN rail EN 60715 35x7.5/15
Electrical accessories	Battery module
Other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)